DOCUMENT RESUME

ED 088 871 SP 007 844

AUTHOR	Martin, Marian
TITLE	Attitude Change after Behavioral Training.
INSTITUTION	Arizona Univ., Tucson. Arizona Center for Early Childhood Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
PUB DATE	[74]
CONTRACT	OEC-3-7-70706-3118
NOTE	41p.
EDRS PRICE	MF-$0.75 HC-$1.85
DESCRIPTORS	*Behavior Change; Behavior Patterns; *Changing Attitudes; Day Care Services; Educational Attitudes; *Inservice Teacher Education; *Preschool Teachers; Teacher Attitudes; *Teacher Behavior

ABSTRACT

This paper reports the results of a survey of attitudes administered in conjunction with a program of behavioral training. The trainees were employees of federally supported child care centers, and the program was specifically designed to modify some behaviors of the trainees toward the children with whom they worked. The training staff consisted of graduate students in developmental psychology. The training methods, which can be described as behavioral engineering, consisted of situations in which trainees observed demonstrations of various goal behaviors and subsequently practiced these behaviors themselves. Lectures, discussions, written materials, and assignments followed each observation and practice session. The pre- and post-training survey covered three main areas of child development and management: a) the use of reward and punishment, b) the reasons children behave as they do, and c) the use of written records in day care centers. The results of the post-survey show that a) with regard to use of reward and punishment, many subjects registered a positive change in attitude; b) with regard to explanations of children's behavior, there was no significant change in the attitude of the subjects; and c) subjects developed a clearer awareness of the necessity of record keeping although the competence with which they kept records showed little improvement. (HMD)

Document Number 70706-A-D0-U-12

ED 088871

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Attitude Change After Behavioral Training

Marian Martin
(Arizona)

The research or work reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare through the Arizona Center for Early Childhood Education, a component of the National Laboratory on Early Childhood Education, contract OEC-3-7-70706-3118.

Contractors undertaking such work under Government sponsorship are encouraged to express freely their professional judgment in the conduct of work. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

SP 007 844

ATTITUDE CHANGE AFTER BEHAVIORAL TRAINING[1]

Marian Martin

Attitudes have been a focus of interest and investigation by social psychologists for over half a century. A general approach in the field has been to postulate the existence of attitudes, or attitude systems, whose characteristics and functions could be inferred from one or more behavioral indices. Social behavior has often been viewed as a component, along with cognitive and affective components, of attitudes. That this approach has been a difficult one is reflected in the statement by Rokeach (1968) that "There is as yet little consensus about exactly what we mean when we speak of a belief, an attitude, a value.... We are still a long way from understanding the theoretical relationship between attitudes and behavior, between attitude change and behavioral change, and we have not yet learned how to predict accurately one from the other (p. x)."

Doob (1947) and Staats (1968) have suggested that attitudes are behaviors, and should be studied within the framework of a general theory of behavior. A behavior theory approach treats attitudes as responses to social stimuli. Thus, as Staats points out, we are considered to have an attitude toward "freedom" but not toward "dinner," although both the word "freedom" and the word "dinner" may elicit positive emotional responses.

The behaviors from which attributes are inferred are usually verbal responses, or responses to verbal stimuli such as rating scales. In some instances, these verbal behaviors correlate highly with other behaviors directed toward the same reference object. For example, the verbal response, "I am going to vote for Jones," has been found to be so highly correlated with actual voting behavior, that the outcome of elections involving millions of voters can be predicted to within one or two percentage points from a selected sample of a thousand or so individuals.

---

[1]This investigation was supported by the Arizona Center for Early Childhood Education, Dr. Marie M. Hughes, Director. Many thanks are due to the members of the training staff, all of whom contributed to this work: Jean Baker, Larry Brandt, Joseph Patterson, James Peterson, and Billie Underwood. The interviews were conducted by Angela Garcia, Elizabeth Gonzales, and Lupe Romero. Grateful acknowledgement for his assistance at every stage of the research is made to Dr. Glenn M. White of the University of Arizona Department of Psychology.

Problems arise, however, when this correlation is not high. Individuals whose verbal behavior toward religion, liberty, or members of other races is positive may not perform the political or social behaviors thought relevant to religiosity, liberalism, or tolerance.

Dissonance theorists Insko and Schopler (1967) state that "attitude change is the most likely form of inconsistency resolution in any situation in which new behavior occurs (p. 366)." Students and practitioners of behavior modification have generally neglected a systematic study of changes in verbal behaviors accompanying other behavior changes. It seems clear that significant and durable changes in human behavior can be affected without much attention to the individual's overt or covert verbal behaviors (Ullman and Krasner, 1965). However, such changes may occur, whether as a means of inconsistency resolution or as a result of contingencies of reinforcement.

Janis and King (1954), and Scott (1957, 1959) have shown a relationship between subjects' (Ss') ratings on attitude scales and their overt verbal behaviors. A shift in ratings was obtained toward a position verbally espoused by the Ss. Scott's results also indicate that the shift is greater if the overt verbal behavior is socially reinforced.

This paper reports the results of a survey of attitudes administered in conjunction with a program of behavioral training. The trainees were all employed by federally-supported child day care centers, and the program was specifically designed to modify some behaviors of the trainees toward the children with whom they worked. The training staff was graduate students in developmental psychology. We were interested in whether there would be changes in attitudes, or verbal responses, of the trainees, and in what ways these would be related to observed behavioral changes and program goals.

The survey covered three main areas of child development and management: Area A, the use of reward and punishment; Area B, why children behave as they do; and Area C, the use of written records in day care centers.

The following predictions were made: (a) positive changes in item ratings (i.e., toward judges' ratings) would occur between the pretest (Interview prior to training) and post test (interview after training); (b) the number of piles into which items were sorted would decrease from the pre- to the post test; and (c) the number of items rated "sometimes," "don't know," etc., would decrease from pre- to post test.

In addition, an analysis was made of the correlation between attitudinal and behavioral changes. Finally, we looked at the overall pattern of group responses, to get a picture of the trainee's initial verbal behavior as regards these child development areas, and the changes, if any, obtained after training.

The Training Program

The assumptions and general procedures of the training program will be given; a more extensive description of the program is in preparation.

Assumptions of the Training Program

1. Children enrolled in Head Start day care centers are drawn from a population that experiences a low rate of success in existing educational systems.

2. Intelligence is not a fixed, inherited capacity, but is in large part a function of the child's experiences, notably his early experiences.

3. In addition to medical care, food, and safekeeping, the day care centers should supply children with the kinds of training in which their prior experience may have been deficient, and upon which their later school success will to some measure depend. This training would be in the areas of (a) language, (b) ideas and concepts, (c) specific skills, such as attending, asking questions, and solving problems, (d) behaviors such as imitating, working as part of a group, getting along with others, task completion, (e) feelings of value, competence and success about themselves, and (f) interest in and positive feelings toward other people.

4. In order to best serve the children, those in charge should be able to (a) establish new appropriate behaviors, (b) eliminate inappropriate behaviors, (c) use and teach cues which indicate that specific behaviors should or should not occur, (d) develop the child's competence, and (e) evaluate the results of what they do with the children in all of the areas listed in 3, above.

Training Procedures

Five trainee groups, each consisting of a teacher and two or more aides and volunteers, participated in the four-week training program.

During the first two weeks, the trainees and ten children from their own center groups spent two morning hours daily in the University Preschool Laboratory. The children's activities in the laboratory included breakfast, story time, lessons, music, art, exploration, and a free choice activity period. The second two weeks of training took place in the centers, where a full day program was maintained.

The training methods can be described as "behavioral engineering" (Homme, et al, 1968). The trainers set up situations in which trainees observed demonstrations of various goal behaviors, and then practiced these behaviors themselves. Approximations to, and performance of, goal behaviors by trainees were reinforced. An effort was made to eliminate inappropriate trainee behaviors, such as explaining and accepting a child's tantrum behavior because of his mother's promiscuity (blaming the home), and making warm attention contingent on isolate, aggressive, or disruptive behaviors of the children (reinforcing unwanted behaviors).

Brief lectures, discussions, written materials, and assignments, followed each day's observation and practice sessions. An attempt was made in this way to supply and repeat verbal labels for the behaviors observed and practiced by the trainees, and the contingencies between these behaviors and those of the children.

Stress was laid on the setting of behavioral goals, shaping and reinforcement of goal behaviors, extensive use of positive reinforcement, team work and problem solving, and evaluation of methods and procedures. Focus throughout remained on the behaviors of both children and adults, with no attention given to concepts such as needs, emotional disturbance, personality growth, etc.

Assessment of Training Goals

The trainers recorded a series of naturalistic observations in the centers, noting behaviors of children and adults, and overall ongoing activities. The observations were helpful in developing both specific training goals and a variety of assessment measures. These measures, collected both before and after the training program included video taping and recording of sound levels in the centers, recording of trainee behaviors, and the survey of trainee attitudes. In addition, trainees were asked to have the children in their group engage in a behavioral task, as an indirect measure of trainee behavior.

Behavioral Measures of Training Effects

Approval and disapproval. Using a modification of the TIA recording procedure developed by Rosenthal, Underwood and Martin (1968), observers recorded approval and disapproval dispensed by trainees, and the targets of these incentives. Targets were either individual children, or groups of children, and incentives were categorized as verbal, gestural, or physical.

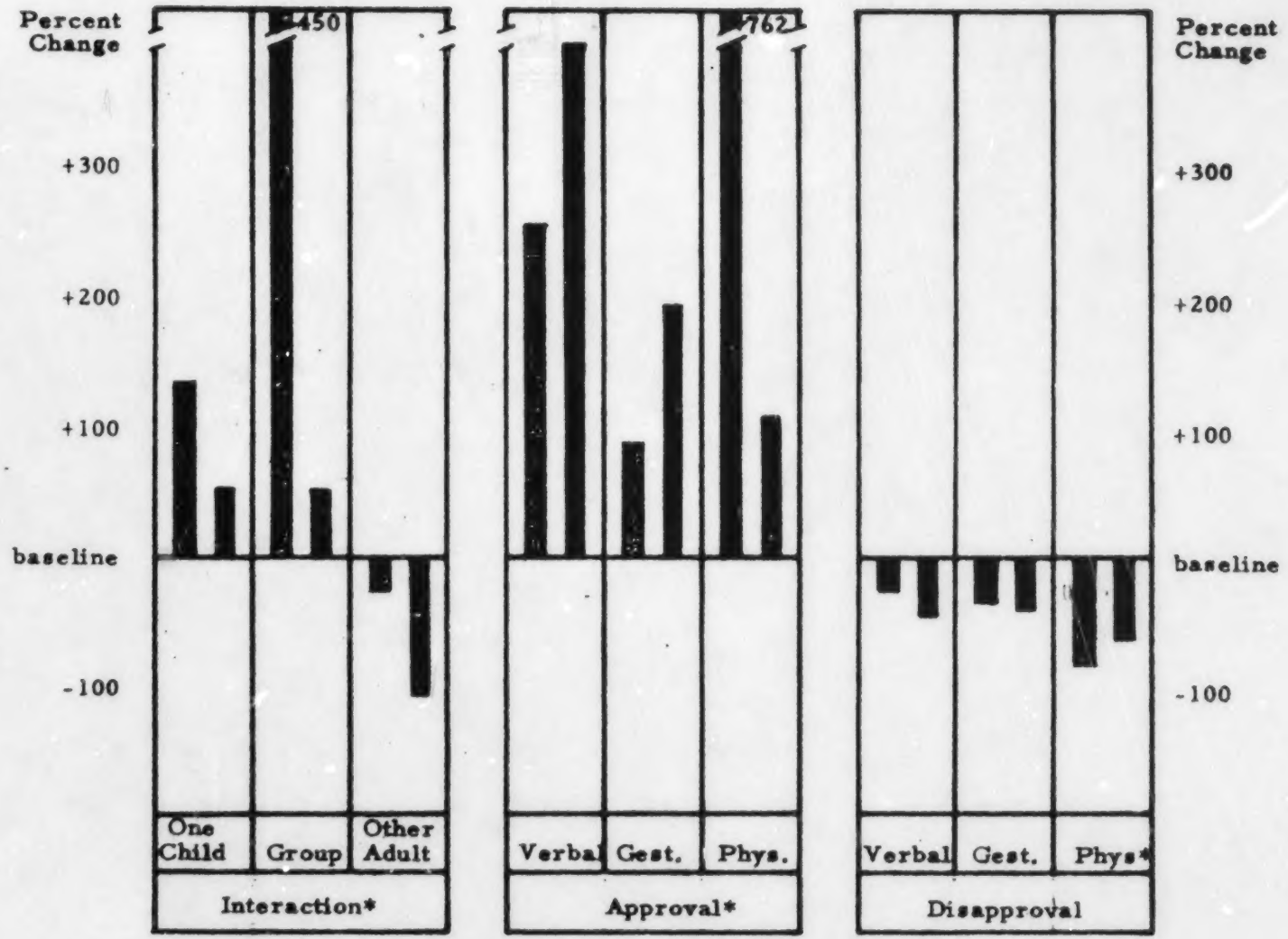
Figure 1 shows the overall increase in recorded approval, and the decrease in disapproval. The trainee's total interaction with the children (approval plus disapproval) also increased markedly. Significance levels of these results are indicated in Figure 1.

Behavioral task. The trainees were asked to have the children in their groups drop dry beans into small holes in empty milk cartons. A set of standard instructions were used, and no explanation was given other than "we would appreciate very much ..." During the first presentation of this 15 minute task, coordination among teachers and aides was rather poor, performance by children was highly variable, and many inappropriate behaviors, such as throwing beans at one another, were evident. During the post-training presentation, better adult coordination, a higher level of performance by children (with good reinforcement from adults), and few or no inappropriate behaviors, occurred. As seen in Figure 2, an increase was obtained in weight of beans dropped into holes by three out of five experimental groups, while a control group from another day care program showed a marked decrease. The overall increase in weight of beans in the experimental groups was significant at the .02 level ($t = 2.4390$).

Method

Design

The attitude survey was administered to an experimental group and a control group, as shown in Table 1.



* $p < .05$

Figure 1. Per cent change after training in nine categories of recorded behaviors of four teachers and ten aides. Dotted bar: aides; solid bar: teachers.

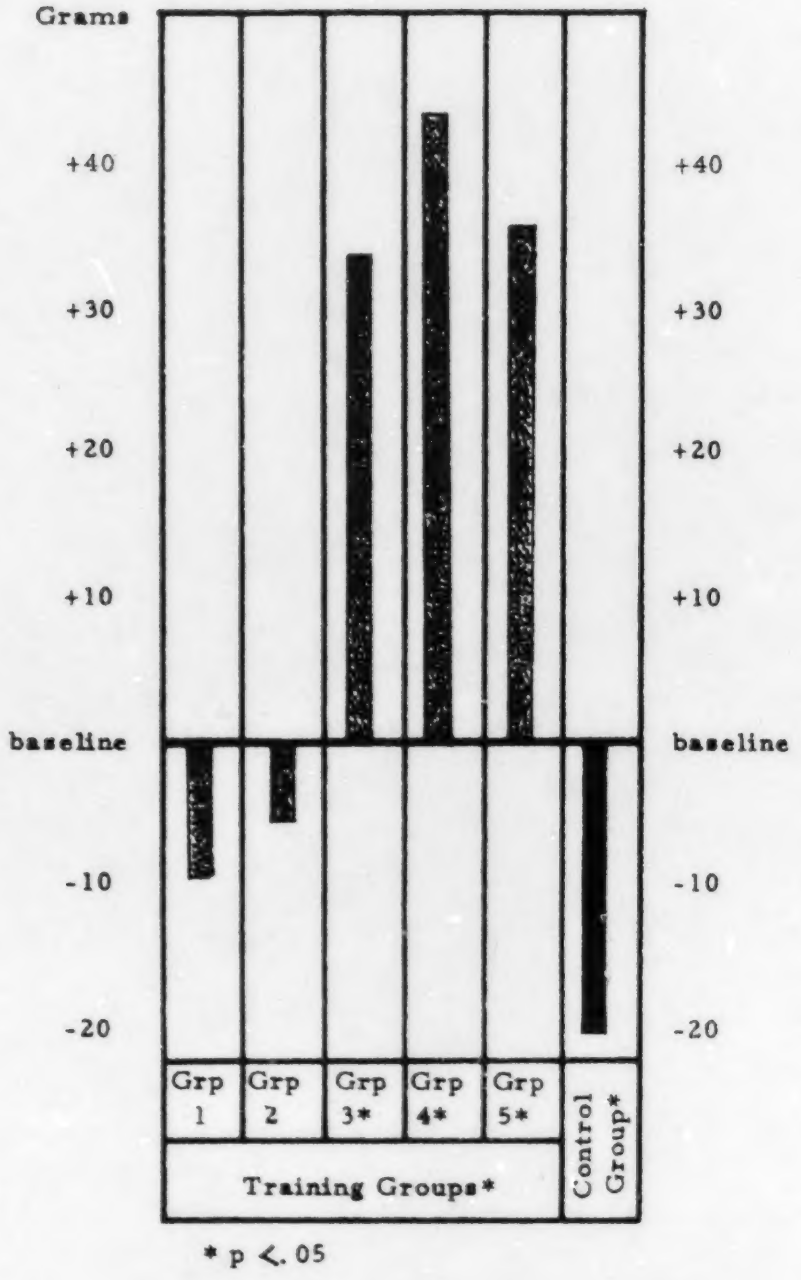


Figure 2. Difference in weight of beans

Table 1

Attitude Survey Design

Name of Group	Pretest	Training	Post Test	N
Training Aides	+	+	+	10
Teachers	+	+	+	4
Control Aides	+	-	-	6

Subjects

Training group Ss were four teachers and ten aides employed by Child Development Centers, Inc. A fifth teacher left her position before training began; two other aides were unavailable for post-training interviews. Except for one teacher, all of the Ss were women. Their ages ranged from 21 to 56 years (mean age 38.4 years). All were married, with from zero to seven children. Their length of employment at the Centers ranged from 6 to 34 months (mean length of employment, 20 months). Seven Ss were Negro, five Mexican-American and two Anglo. The teachers were certified for the elementary grades. Aides were drawn from the poverty area population; six had completed high school or had obtained an equivalency certificate.

Control group Ss were six substitute aides, employed on an irregular basis by Child Development Centers, Inc. None had worked during the summer. Their age ranges, economic, and ethnic background was similar to that of the training group. All Ss in this group were women.

Survey Construction

The three main areas of the survey were subdivided as follows. Area A, the use of reward and punishment with children, was subdivided into sections A1 and A2. Although the items in these sections were worded differently, they both covered the same area. Instructions given to Ss also differed, as is noted below.

Area B, why children behave as they do, was not subdivided. Area C, the use of written records, was subdivided into two sections. Of these the longer, C1, was designed for both teachers and aides, while a shorter section, C2, was designed for teachers only.

Two members of the training staff collected from 50 to 60 statements representative of each of the three main areas to be surveyed. Three judges (all judges were training staff members) then evaluated each item as to its face validity. Items considered valid by all three judges were then rated by five judges for pertinence to training goals. A scale from one (not pertinent) to seven (highly pertinent) was used. Items included in the survey were those receiving a total rating of from 20 to 35.

Finally, each survey item was rated by three judges along a seven-point scale from one (strongly disagree) to seven (strongly agree). An agreement-disagreement score was thus assigned to each item, reflecting the judgments and goals of the training staff. All retained items, and judges' ratings, appear in the Appendix.

Two bilingual staff members, in consultation with a training staff member, translated the items into simple, colloquial Spanish. Items were numbered and typed, in both English and Spanish, on slips of paper measuring two by four inches.

Within each section, items were arranged in random order, and the slips of paper made up into stacks accordingly. Each stack, containing all of the items in one of the survey sections, was placed into an individual envelope, labeled on the front with S's name, and the section letter and number. The interviewers were given sets of four envelopes for each S.

Interviews

Interviews were conducted by three bilingual female members of the Arizona Center for Early Childhood Education staff. All had considerable experience in interview work with similar Ss.

The day and time for each training group interview were confirmed by telephone. Generally, two or three interviews were held in succession, during the children's afternoon naps, in as private a section of the building as could be found.

The interviewer told each training group S that the University staff wanted to find out some of their ideas about the children, so that the best

possible training program could be developed. It was emphasized that their participation in the interview would help us in doing this, that we were grateful for their help, and that all responses would be kept confidential.

The interviewer then opened envelope A1, removed the stack of slips containing section A1 items, and gave the following instructions:

> Each paper in this stack (pile, group) tells about a way of handling children. Would you please put these papers into piles, according to how much you think doing what the paper says would help the children.
>
> The piles should be arranged so that in the first pile would be all the things which would help children the least. The last pile should be those that would help children the most.
>
> Please feel free to use as many or as few piles as you need. You can also go back to statements you have already sorted and rearrange them at any time. Are there any questions?

Instructions for sections A2, B, C1, and C2 differed from those in section A1 in that Ss were asked to sort the statements into piles "according to how much you agree or disagree with what the paper says. The piles should be arranged so that the first pile would be all the things with which you disagree with the most. The last pile should be those that you would agree with the most." The remaining instructions were identical with those for section A1.

During sorting, interviewers answered any questions about the procedure, or individual items. Questions about items were answered by first reading the item aloud, and by explaining certain words, or the item's meaning. Items were not discussed at any length; Ss who persisted in questioning about a given item were told that perhaps they could just say they were not sure about the item, because the interviewer wasn't supposed to explain it any more than she had already done. Few Ss asked questions about the items during sorting.

After sorting was completed, the following instructions were given:

> Section A1: Now, please give a name to each pile you have made, according to how much doing what it says would help children (e.g., a lot, a little, not at all, etc.)

Sections A3, B, C1 and C2: Now, please give a name to each pile you have made, according to how much you agree or disagree with what it says (e.g., agree a lot, agree a little, etc.).

The interviewer wrote the names given to each pile by the S on the back of the bottom statement in the pile, as well as the number of the pile, giving the number one to a pile at one end of the row, and numbering the other piles in succession. She stapled the items in the pile together, and then put all the piles back into the same envelope before proceeding to the next section.

Training group Ss were first interviewed from one to two weeks prior to training. During the first or second week after the four-weeks training period, these Ss were re-interviewed. The procedure was exactly the same as before, except that Ss were told that we wanted to see "how you feel about these statements now." Confidentiality was stressed, as before.

Control group Ss were interviewed at the Arizona Center for Early Childhood Education or at their homes. A four to six week interval separated the first and second interview. Procedures for control Ss were essentially the same as those described for the training group, except that the request for participation was stated to be "a way of helping us make our training program better." Interviewers carefully explained to substitute aides that jobs in the day care centers were in no way contingent on their participation or responses.

Each S's response to each item on the pre and post test was scored as congruent or incongruent with the judges' ratings. A difference score was then given to each item to indicate whether the S had shown any change in sorting the item from pre to post test. A score of zero (0) indicated that there had been no change in the S's rating of the item; a plus score (+) was given for any change in the direction of the judges' rating; a minus (-) score was given for any change in a direction away from the judges' rating. A total plus score, and a total minus score, were then calculated for each S. The difference between the plus and minus totals became an index of overall change for the S.

Percent of items involved in rating changes. We were not as much interested here in comparing results across groups, as in determining whether item rating changes were broadly distributed throughout the survey, or dependent on only a few of the items.

The training group showed positive changes, i.e., toward judges' ratings, on 91.6 per cent of the survey items in sections A1, A2, B, and C1. Section C2 was omitted from the analysis because of high initial agreement and the small number of teachers in the sample. Negative changes in this group occurred on 57.8 per cent of the items in these sections. The control group showed positive change on 60.2 per cent and the negative change on 64.0 per cent of the items in the same sections. Data for individual sections are reported in Table 2.

Table 2

Per Cent of Items Involved in Positive and Negative Rating Changes

	A1	A2	B	C1	C2
Training Group:					
Positive Change	93.7	81.8	92.0	100.5	30.8
Negative Change	50.0	36.4	76.0	65.0	23.1
Control Group:					
Positive Change	43.7	50.0	72.0	75.0	----
Negative Change	75.0	59.0	52.0	70.0	----

Rating Differences

Mean numbers of item ratings congruent with judges' ratings are shown for each survey area in Table 3. Mean difference scores are also shown. Although training group Ss showed positive difference scores in each of the areas, the most positive change occurred in sections A1 and A2.

Table 3

Mean Congruent Item Ratings and Mean Difference Scores for all Subjects

Group	Sections A1 and A2			Section B			Section C1		
	Pre Test	Post Test	Difference	Pre Test	Post Test	Difference	Pre Test	Post Test	Difference
Training (all)	11.1	14.8	7.4	14.6	17.3	3.7	15.1	15.9	0.86
Training (aides)	10.7	14.2	7.1	14.1	16.7	3.3	13.1	13.8	1.2
Control	12.7	11.5	-1.7	12.3	16.7	0.17	9.3	12.7	1.5

Analyses of variance were performed for significance of differences on the pre and post tests for the training group aides and control group on each individual section. These analyses are summarized in Tables 4, 5, 6, and 7.

Table 4

Repeated Measures Analysis of Variance for Section A1

Source	M.S.	D.F.	F	p
Total	3.6522	31		
Between	4.5146	15		
Groups	1.1021	1	.232	.64
Error (g)	4.7583	14		
Within	2.8438	16		
Trials	3.7813	1	2.823	.11
G x T	22.9687	1	17.150	.001
Error (t)	1.3393	14		

Table 5

Repeated Measures Analysis of Variance for Section A2

Source	M.S.	D.F.	F	p
Total	9.3548	31		
Between	7.0667	15		
Groups	1.2000	1	.160	.70
Error (g)	7.4857	14		
Within	11.5000	16		
Trials	60.5000	1	13.691	.003
G x T	61.6333	1	13.947	.002
Error (t)	4.4190	14		

Table 6

Repeated Measures Analysis of Variance for Section B

Source	M.S.	D.F.	F	p
Total	13.4798	31		
Between	17.1250	15		
Groups	6.0750	1	.339	.57
Error (g)	17.9143	14		
Within	10.0625	16		
Trials	84.5000	1	16.693	.001
G x T	5.6333	1	1.113	.31
Error (t)	5.0619	14		

Table 7

Repeated Measures Analysis of Variance for Section C1

Source	M.S.	D.F.	F	p
Total	9.3538	31		
Between	11.3646	15		
Groups	45.0187	1	5.024	.04
Error (g)	8.9607	14		
Within	7.4688	16		
Trials	22.7812	1	3.810	.07
G x T	13.0021	1	2.174	.16
Error (t)	5.9798	14		

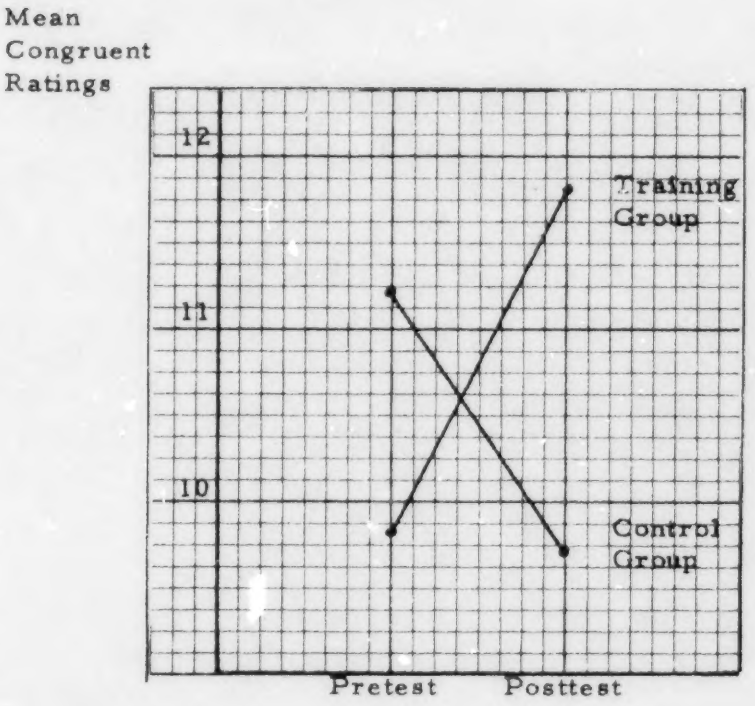


Figure 3. Section A1 Interaction

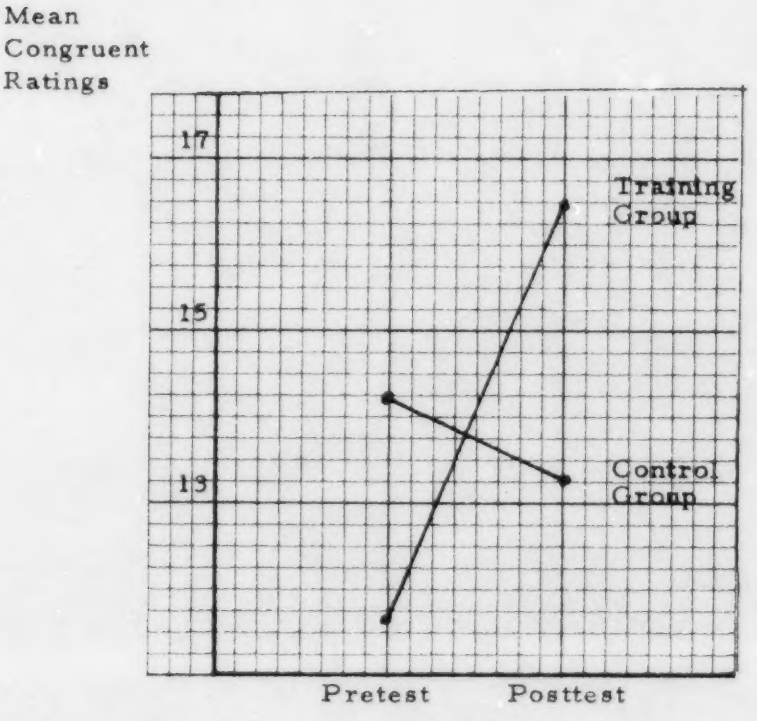


Figure 4. Section A2 Interaction

In both sections A1 and A2, the Groups x Trials interactions were significant ($p < .001$ and $p < .003$, respectively). These interactions are graphed in Figures 3 and 4. Tests for simple effects indicate that the increase in item congruency in the training group Ss was significant in sections A1 and A2 ($F = 14.833$, $df = 1/14$, $p < .01$, for section A1; $F = 27.160$, $df = 1/14$, $p < .01$, for section A2). The decrease in congruency for the control group Ss in these sections was significant only in Section A1 ($F = 5.077$, $df = 1/14$, $p < .05$). Thus in sections A1 and A2 the training group Ss increased significantly in item congruency and the control Ss either did not change significantly or showed a significant decrease.

Difference scores (Table 3) take both positive and negative changes into account. In keeping with the findings above, the mean difference score for training group aides was +7.1 compared to a mean difference score of -.17 for the control group in sections A1 and A2.

In section B, congruent items ratings increased on the post test for both the training and control groups. The main effect of trials in this section was significant (Table 6, $p < .001$). Tests for simple effects indicate that this increase was significant in both groups ($F = 6.677$, $df = 1/14$, $p < .05$ for the training group; $F = 11.128$, $df = 1/14$, $p < .01$ for the control group). The groups x trials interaction in this section was not significant. Mean difference scores in section B were +3.3 for training group aides and +0.17 for the control group, indicating less negative change in the trained subjects.

There was a significant difference between groups in section C1. In this section, training group aides rated a mean of 13.1 items congruently on the pretest, and 13.8 items congruently on the post test, a difference which does not approach significence. The control group mean was significantly lower than that of the training group on the pretest (Table 3), and the control group increase on the post test was significant ($F = 5.568$, $df = 1/14$, $p < .05$). Neither the main effect of trials nor the group x trials interaction were significant in this section, however. Mean difference scores in section C1 were +1.2 for the training group aides and +1.5 for the control group, indicating comparable negative as well as positive changes.

Differences in Number of Piles

The mean number of piles into which Ss sorted items is shown in Table 8. Table 9 summarizes an analysis of variance for differences in

number of piles from pre to post test, for the training and control group aides.

Table 8

Mean Number of Piles

Group	Pretest	Post Test	Difference
Training (All)	11.2	9.9	-1.3
Training (Aides)	10.8	9.6	-1.2
Control	12.3	11.7	-0.6

Table 9

Repeated Measures Analysis of Variance for Number of Piles

Source	M.S.	D.F.	F	p
Total	5.1452	31		
Between	8.5000	15		
Groups	24.3000	1	3.297	.09
Error (g)	7.3714	14		
Within	2.0000	16		
Trials	8.0000	1	4.773	.04
G x T	.5333	1	.318	.59
Error (t)	1.6762	14		

Both groups made fewer piles on the post test. The main effect of trials was significant (Table 9, $p < .04$). Tests for simple effects showed the decrease in the control group to be nonsignificant ($F < 1$), while the decrease in the training group aides barely missed significance at the 95 per cent level ($F = 4.295$ at $df = 1/14$; $F = 4.60$ at $p = .05$).

Differences in Number of Items Rated "Depends"

Table 10 shows the mean number of items rated "depends," "don't know," "sometimes," etc. An analysis of variance for the differences in number of uncertain item ratings, from pre to post test, in the training group aides and control group is summarized in Table 11.

Table 10

Mean Number of Items Rated "Depends"

Group	Pretest	Post Test	Difference
Training (All)	9.1	5.4	-3.7
Training (Aides)	7.3	3.1	-4.2
Control	19.0	12.5	-6.5

Table 11

Repeated Measures Analysis of Variance for Number of Items Rated "Depends"

Source	M.S.	D.F.	F	p
Total	106.0071	31		
Between	188.6479	15		
Groups	834.7687	1	5.858	.03
Error (g)	142.4964	14		
Within	28.5312	16		
Trials	205.0312	1	11.883	.004
G x T	9.9187	1	.585	.53
Error (t)	17.2536	14		

The control group made significantly more uncertain item ratings (Table 11, $p < .03$). The number of such ratings decreased from the pre to post test in both groups, and tests for simple effects show that these differences are significant ($F = 5.112$, $df = 1/14$, $p < .05$ for the training group aides, and $F = 7.346$, $p < .05$, for the control group).

Correlation Between Attitude and Behavior Change Measures

A difference score in units of observed behaviors was available for training Ss in the categories of approval, disapproval, and interaction with children (approval plus disapproval). Difference scores in each of these categories were compared by means of Pearson r with Ss' difference scores in overall item ratings.

The calculated coefficients of correlation failed to approach significance at the .05 level on any of these comparisons.

Comparison of Item Ratings of Trainers and Trainees

Initial agreement. Of the 14 Ss in the training group, a majority (8 or more) were in agreement with the judges' ratings on 60 out of the total

96 items on the pretest (62.5 per cent). On 25 items, 12 or more training group Ss agreed with the judges' rating the first time they were surveyed. There was unanimous agreement on eight items. In general, Ss showed considerable uniformity as a group in their responses to the items, and overall responses of teachers and aides did not differ.

Training group Ss agreed unanimously that "When a child is doing something good, you should let him know it right away," and "A friendly smile, or saying 'Good' can be a big reward for some children." Thirteen initially agreed (the lone dissenter changed her rating after training) that "Children should be rewarded for the good things they do," "It helps a child to learn when you tell him what he is doing right," and "You can teach a child to be friendly." Training group Ss ratings also showed broad agreement with those of judges on the value and use of written records.

Change from initial agreement to post test disagreement was very small, with no Ss changing to disagreement on most of the items with which a majority (seven or more) initially agreed, and not more than three changing to a negative rating on any of these items.

Initial disagreement and post test change. The main area of initial disagreement between the judges and trainees was not on the value of reward, but its specific use. Thirteen out of 14 trainees initially agreed that "A child who behaves badly is the one that really needs the teacher's attention." Twelve initially agreed that "Ignoring bad behavior only makes it worse," and "If someone will pay attention to a child when he acts bad or unhappy, it will help him to learn to act better." These were all items with which the judges disagreed. Eight Ss changed their rating on the first, and ten on the second of these items, on the post test. A similar pattern of initial disagreement and change appeared on related items, such as "An aide can help by leaving the children alone when they are doing well," as well as "Once you start rewarding a child, he won't do anything unless you go on rewarding him just as much."

Another area of initial disagreement and terminal agreement between judges and trainees was that of the role and responsibility of the home in determining the behavior of the child. Eleven trainees originally agreed that "The way a child acts at the C.D.C. depends on what his home is like," a rating changed by eight trainees on the post test. Six of the seven trainees who initially agreed that "The best way to find out if a child can learn is to give him an I.Q. test," changed their rating on the post test to share the judges' disagreement with this item. The four trainees who initially agreed that "You really can't do much about how children act," and "There is not

much a teacher can do about the way some children act," changed their rating on the post test, as did the three who initially agreed that "Some children are born mean."

Initial and terminal disagreement. On the other hand, training group Ss disagreed soundly with the judges on several items, on both the first and second interview. Several of these items were in the area of children's inner needs and feelings. From 12 to 14 Ss initially agreed that "The way a child acts shows what is bothering him inside," "Children act the way they do because they have special needs," "We need a record of how a child feels," and "The first step in handling problem behavior is to find out why the child needs to act that way." Only two Ss changed their ratings on each of these items on the post test.

A similar pattern of consistent disagreement with the judges occurred on only one other item. Eleven Ss agreed that "The best way to find out why a child did something is to ask him." Only two Ss changed their ratings after training on this item.

Item Changes of Training Versus Control Group Subjects

A majority (seven or more) of the training group Ss changed their item rating from initial disagreement to post test agreement on ten items. These were items 2 and 13 in section A1, items 2, 4, 6, 13, 17, 19, and 22 in section A2, and item 4 in section B.

No control group Ss changed from initial disagreement to agreement on six of these items, one S changed on two items, and two Ss on two others. This pattern of change for all Ss is shown in Table 12.

Table 12

Per Cent of Training and Control Group Subjects Changing From Initial Disagreement to Terminal Agreement on Selected Items

Section	Item	Training Group	Control Group
A1	2	64	0
	13	57	0
A2	2	50	33
	4	50	0
	6	64	17
	13	57	17
	17	71	0
	19	57	0
	22	57	0
B	4	57	33

Discussion

The results of the attitude survey present evidence for verbal behavior, or attitude, change accompanying the other behavior changes recorded in the training group. The item rating difference scores of the trained Ss and their change scores on the various behavior measures employed, both changed in a positive direction, i.e., in the direction desired by the training staff. There was not a significant correlation between these sets of scores, however. There may be some difficulty raised when one attempts to equate one reinforcement dispensed with one positive item rating, but the present conclusion is that verbal and other behavior changes were not proportional within individual Ss.

Item Rating Changes

Both negative and positive changes were broadly distributed among the survey items. A greater percentage of items were involved in positive change in every section of the survey for the training group, while the control group showed negative change on a larger percentage of the items

in two out of four sections. Difference scores were more positive for the training group in every section except C1.

In survey area A, The Use of Reward and Punishment with Children, the results indicate a pattern of significant positive change in the training group, without a corresponding change by the control group. Both groups of Ss showed significantly more congruence on the post test in area B, Why Children Behave as They Do. However, the difference scores in area B for training group Ss were nineteen times as great as those for control group Ss. In section C1, The Use of Written Records, training group congruence remained constant while a significant increase was shown by the control group. Difference scores for section C1 were comparable for the two groups.

The results indicate that the training program effected changes in only some attitudes of the Ss. The results in area B can be interpreted as a failure to produce change. The reliability of items in area B can be questioned also, on the basis of large changes by the control Ss in both positive and negative directions.

There was clearly little change as a result of training in section C1. One explanation may be the initially high congruence obtained in this section, a ceiling effect for the trained Ss who had previously been instructed on the value of keeping records. The significant positive change obtained in the control group in section C1 is more difficult to explain. One possible source for this change is the increased employment by the Centers of two control Ss, who were thus exposed not only to the Centers, but to the trained Ss, between their pre and post test interviews. This conclusion assumes that while such brief exposures were insufficient to alter these Ss' attitudes toward the use of reward and punishment, they did at least notice that record keeping was an important part of the Center's daily routine, and they simply shifted toward a more favorable position toward records per se.

At any rate, the attempts of the training staff to change the verbal behavior of the trained Ss toward record keeping, for example, to record overt problem behaviors and to abandon the attempt to record emotional states and vague developmental factors, was unsuccessful. In retrospect, a minimum of time was spent in training in this area, and in particular, little or no time was spent on record keeping during the two weeks in-Center period. Sample record forms were not provided, and no demonstration was given of the often misleading character of some of the records

being used. Thus, one might use the index of no change in verbal behavior to predict a lack of change in overt in-Center behavior by the trainees, behavior on which we unfortunately lack records.

Other Measures

Both the training and control groups sorted the items into fewer piles on the post test than on the pretest. This difference was nonsignificant in the control group but very narrowly missed significance at the 95 per cent level in the training group. Both groups showed uncertain item ratings. Because of the Ss relatively poor verbal skills, improvement in comprehension with repeated testing would be expected. This improvement may have been greater in the control group, whose exposure to the subject matter was initially more limited. However, neither of these measures offered strong evidence for differential change.

Effects of Training

The training group Ss entered the training program in substantial agreement with the training staff on the value of reinforcement in the management and teaching of children. This was true even though behavioral record show that the amount of positive reinforcement dispensed in the Centers was not high. Expressed opposition to the use of "reward" with children is frequently encountered in middle-class individuals, who consider it to be "bribery" or who feel that children should be good because they want to be good. Such opposition was not encountered in the training group.

The initial differences between trainers and trainees item ratings involved the contingencies under which reinforcement should be used. Perhaps through contact with previous Head Start training programs, with supervisory personnel, or from their own backgrounds, the trainees initially held that reinforcement should be optimally, and almost exclusively, contingent on need, crisis, and sorrow behaviors, rather than on appropriate, happy, capable ones. The training was centered on the modification of trainee behaviors in this area: The increased use of positive reinforcement, under well-engineered contingencies. It was in this area that maximum change occurred in survey item ratings. Of ten items in the survey on which a majority of the training group Ss initially disagreed and terminally agreed with judges' ratings, nine were in area A, and one

in area B. That is, the trainees' verbal behavior changed most on precisely those matters in which they were directly trained. Recordings of trainee behaviors made in the Centers showed that their overt behaviors underwent corresponding changes. Extrapolation of specific training effects to the more general area B, Why Children Behave as They Do, apparently did not occur.

Measuring Verbal Behavior Change

The results of the attitude survey used in this study were both interesting and useful to the training staff. Initial attitudinal data from such surveys could be helpful in supplementing behavioral observations in developing training program goals of maximum relevance to a particular group of trainees. Data on attitudinal change are also a potentially important component of training assessment. That is, a training staff, in addition to demonstrating on the job behavioral change in trainee groups could develop data to show corresponding changes in verbal behavior. Failure to obtain verbal behavior change may indicate areas of training failure, or areas where additional behavioral recording measures should be employed.

The payoff from measures of attitudinal or verbal behavior change during behavioral training may thus be high. Data from such measures can be useful in planning, evaluating, and improving the training program. Behavioral training is also a potential source of information on various relationships between verbal and nonverbal behaviors. In an ongoing training program, scales such as those developed for this survey could be tested and improved, with possible eventual usefulness in predicting trainee behaviors and behavior changes after training. By varying verbal and nonverbal components of behavior modification procedures, information on variables affecting verbal behavior could be generated. Indeed, this could prove to be a fruitful approach to the study of attitudes as behaviors.

References

Doob, L. W. The behavior of attitudes. Psychological Review, 1947, 54, 135-156.

Homme, L., C'deBaca, P., Cottingham, L., & Homme, A. What behavioral engineering is. Psychological Record, 1968, 18, 425-434.

Insko, C. A., & Schopler, J. Triadic consistency: A statement of affective-cognitive-conative consistency. Psychological Review, 1967, 74, 361-376.

Janis, I. L., & King, B. T. The influence of role-playing on opinion-change. Journal of Abnormal and Social Psychology, 1954, 49, 211-218.

Rosenthal, R. L., Underwood, B., & Martin, M. Assessing classroom incentive practices. Journal of Educational Psychology, in press.

Scott, W. A. Attitude change through reward of verbal behavior. Journal of Abnormal and Social Psychology, 1957, 55, 72-75.

Staats, A. W. Learning, language, and cognition. New York: Holt, Rinehart, & Winston, 1968.

Appendix

The tables below indicate each survey item, by section. After each item the judges' rating for that item appears. The rating scale used by the judges was as follows:

1. strongly disagree
2. disagree
3. disagree slightly
4. neutral
5. agree slightly
6. agree
7. strongly agree

the four columns to the right of the judges' ratings indicate the responses, and response changes, of Ss in the training group. The letter "C" in the column headings indicates a rating congruent with that of the judges. The letter "I" indicates a rating incongruent with that of the judges. The numbers 1 and 2 refer to the pre and post test, respectively. Thus, the first column headed "C1-C2" indicates the number of Ss who rated on items congruently with the judges' rating on both the pre and post test. "C1-I2" indicates a congruent response on the pretest, but an incongruent response on the post test. "I1-I2" indicates that Ss' responses were incongruent with judges' ratings on both the pre and post test, while "I1-C2" indicates an incongruent pretest rating, followed by a congruent post test rating.

Section A1

The Use of Reward and Punishment

Item	Judges Rating	C1-C2	C1-I2	I1-I2	I1-C2
1. A child should be rewarded with something he likes a lot.	7	8	0	4	2
2. A teacher should pay the most attention to the child who is bad.	1	2	0	3	9
3. A child who does something bad should be punished for it.	5	6	2	5	1
4. Children should be rewarded for the good things they do.	7	13	0	0	1
5. Children who are doing well should be left alone.	2	4	5	1	4
6. When you see a child doing something good, you should let him know it.	7	14	0	0	0
7. Children should not be punished.	4	1	1	11	1
8. When a child is doing something good, you should let him know right away.	7	13	0	0	1
9. A child should be told what it is he is doing right.	7	12	0	0	2
10. Children who act bad should be ignored.	4	1	0	10	3
11. Children should not be rewarded.	1	7	1	2	4

12. Children who don't behave should be spanked.	1	10	3	0	1
13. Paying attention to a child who acts bad will help him to act better.	2	5	0	1	8
14. You should show a child how pleased you are when he acts good, and that you don't like it when he acts bad.	7	10	1	0	3
15. Loving a child helps him be good.	5	10	1	1	2
16. Punishing a child is the only way to get rid of bad behavior.	1	11	2	0	1

Section A2

The Use of Reward and Punishment

Item	Judges Rating	C1-C2	C1-I2	I1-I2	I1-C2
1. It helps a child to learn when you tell him what he is doing right.	7	13	0	0	1
2. An aide can help by leaving the children alone when they are doing well.	2	3	3	1	7
3. An aide should watch for children who are not behaving well, and then she should try to help them.	3	0	0	11	3
4. It is wrong to punish a child.	3	2	1	4	7
5. It is wrong to reward a child.	1	11	0	0	3
6. The child who behaves badly is the one that really needs the teacher's attention.	1	1	0	4	9
7. The best reward for a child is something he likes a lot.	6	6	1	7	0
8. A child knows when he is doing something right; you don't have to tell him.	2	6	0	6	2
9. Teachers and aides should be sure to reward children for the good things they do.	7	10	0	0	4
10. If a child does something bad, he should be punished.	5	4	0	4	6

11. When you see a child doing something good, let him know it.	7	14	0	0	0
12. When a child is doing something good, you should let him know you like it right away.	7	14	0	0	0
13. Ignoring bad behavior only makes it worse.	2	2	0	4	8
14. If a child does something, he will be more likely to do it again if you reward him for it.	7	8	1	1	4
15. A friendly smile, or saying "Good" can be a big reward for some children.	6	14	0	0	0
16. The only way you can handle some children is by a good spanking.	1	9	1	1	3
17. If someone will pay attention to a child when he acts bad or unhappy, it will help him to learn to act better.	2	1	1	2	10
18. You should show a child how pleased you are when he does something good, and that you don't like it when he does something bad.	6	12	0	0	2
19. If you pay attention to a child's behavior, he might go on acting bad just to get you to pay attention to him.	7	4	0	2	8
20. The only way to get rid of bad behavior is to punish it.	1	9	3	0	2
21. A child who is loved will be a good child.	4	3	2	7	2

22. Once you start rewarding a child, he won't do anything unless you go on rewarding him just as much.	1	5	0	1	8

Section B

Why Children Behave as They Do

Item	Judges Rating	C1-C2	C1-I2	I1-I2	I1-C2
1. You can teach a child to be mean.	6	7	2	4	1
2. You can teach a child to be friendly.	6	13	0	0	1
3. You can teach a child to be smarter.	7	8	2	2	2
4. The way a child acts at the C. D. C. depends on what his home is like.	2	3	0	3	8
5. The way a child acts at the C. D. C. depends on what the people at the C. D. C. do.	6	5	2	5	2
6. Some children can't learn, no matter how good the teacher is.	2	7	2	2	3
7. If a child is not taught right at home, there is not much you can do about it at the C. D. C.	1	9	0	0	5
8. Children watch grownups and learn from what they do and say.	7	13	1	0	0
9. Some children are born mean.	1	9	1	0	3
10. Children learn from everyone around them.	6	11	1	0	1
11. A child can't learn for too long because he will get tired.	3	2	2	5	4

12. Children who don't learn are lazy.	3	8	1	0	5
13. Children learn to talk by listening to other people talk.	5	9	3	2	0
14. There is not much a teacher can do about the way some children act.	2	6	1	2	4
15. The way a child acts shows what is bothering him inside.	1	1	0	10	2
16. Some children are born friendly.	2	2	2	6	4
17. How smart a child is depends on how good a brain he was born with.	2	5	2	3	3
18. Real learning starts when a child goes to first grade.	1	10	1	1	1
19. Babies can learn.	7	12	0	0	1
20. Children can't learn much before a certain age.	2	10	1	1	2
21. You really can't do much about how children act.	1	8	1	1	4
22. You can change how children act, even if they have been acting that way all their lives.	7	9	2	1	1
23. Children act the way they do because they have special needs.	2	0	1	11	2
24. The best way to find out if a child can learn is to give him an IQ test.	2	7	0	1	6
25. The best way to find out why a child did something is to ask him.	2	1	2	9	2

Section C1

The Use of Written Records in Day Care Centers

Item	Judges Rating	C1-C2	C1-I2	I1-I2	I1-C2
1. You can learn a lot about children by just watching them.	5	10	1	1	2
2. Written records are more trouble than they are worth.	1	12	0	0	2
3. You can remember the most important things the children do.	1	5	1	6	2
4. Without written records, you really don't know what is going on.	5	8	3	2	1
5. Once you make a written record, nobody ever seems to use it.	3	9	1	2	2
6. The more records you keep, the better.	3	2	2	8	2
7. The fewer records you keep, the better.	2	10	2	0	2
8. We need a record of how a child feels.	3	0	0	12	2
9. We need a record of what a child does.	6	12	0	0	2
10. We can tell that what we are doing with the children really works by keeping written records.	6	11	0	0	3

11. We know that if what we are doing with the children really works without writing down records about it.	2	8	2	1	3
12. We need records of some things, but not of others.	7	5	3	5	1
13. We need some records of what teachers and aides do.	7	13	0	0	1
14. We can tell what we are doing if we have a written record of what we did and what happened.	7	12	0	0	2
15. We know what we are doing without writing it down.	3	8	1	1	4
16. Records can really help us when a child acts bad.	7	10	2	1	1
17. Writing things down when a child acts bad is not going to really help us very much.	2	8	4	1	1
18. Teachers and aides can help the children most if they do not have to spend time keeping written records.	2	10	2	1	1
19. The first step in handling problem behavior is to start making written records of it.	3	0	1	12	1
20. The first step in handling problem behavior is to find out why the child needs to act that way.	1	0	0	13	1

Section C2
(Teachers Only)

The Use of Written Records in Day Care Centers

Item	Judges Rating	C1-C2	C1-I2	I1-I2	I1-C2
1. The best records are those that indicate a teacher's judgments of a child's adjustment levels and capacities.	1	0	0	4	0
2. We need accurate records of a child's emotional structure.	1	0	0	2	2
3. We need records of what a child does.	7	3	0	0	1
4. We need records of what a child is, not what he does.	1	2	1	0	1
5. In general, I think written records are very useful to me in my teaching.	6	4	0	0	0
6. In general, I find written records of little usefulness to my teaching.	2	4	0	0	0
7. Aides can keep useful records.	7	2	0	2	0
8. Meaningful record keeping is usually not done by the aides.	2	1	0	3	0
9. Frankly, good records are my strong right arm.	6	3	0	1	0
10. Frankly, record keeping is a plain pain in the neck.	2	2	2	0	0

11. Whether I keep records or not is not going to make a <u>real</u> difference to either me or the children.	1	4	0	0	0
12. Without a record of what a child can do, we don't know what to teach him.	7	2	1	1	0
13. We know what to teach without looking up a lot of records.	2	2	0	1	1